

Notice of Allowability**Application No.**

10/714,267

Examiner

Brian M. Healy

Applicant(s)

HAYES, ROBERT R.

Art Unit

2883

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. This communication is responsive to the application filed 11/14/2003.
2. The allowed claim(s) is/are 1-29.
3. The drawings filed on 14 November 2003 are accepted by the Examiner.
4. Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some* c) None of the:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

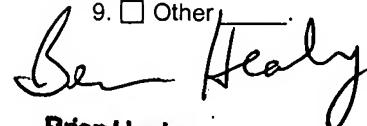
* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
(a) including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 1) hereto or 2) to Paper No./Mail Date _____.
(b) including changes required by the attached Examiner's Amendment / Comment or in the Office action of
 Paper No./Mail Date _____.
Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. Notice of References Cited (PTO-892)
2. Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. Information Disclosure Statements (PTO-1449 or PTO/SB/08),
 Paper No./Mail Date 12142004
4. Examiner's Comment Regarding Requirement for Deposit
 of Biological Material
5. Notice of Informal Patent Application (PTO-152)
6. Interview Summary (PTO-413),
 Paper No./Mail Date _____
7. Examiner's Amendment/Comment
8. Examiner's Statement of Reasons for Allowance
9. Other


Brian M. Healy
Primary Examiner
Art Unit: 2883

DETAILED ACTION

REASONS FOR ALLOWANCE

The following is an Examiner's Statement of Reasons for Allowance: The closest prior art of record, Berry et. al., U.S.P. No. 4,997,249 teaches (Figs.1-8) an optical fiber variable weight transversal filter comprising a plurality of connected optical fiber couplers 15,16 with a looped region between with an RF signal input source 11 with each of the couplers being weighted to have positive and negative weights and an optical output summing detector 17 to provide a filtered output. Neither Berry 249' or any of the references of record teaches or suggests the claimed delay line filter comprising the combination comprising: an optical splitter; an optical splitter; an optical loop having a first and second directional coupler wherein the first directional coupler is in communication with the optical splitter and the second directional coupler; a photodetector in communication with the first and second directional couplers and an impulse cancellation line coupled between the optical splitter and the photodetector. The impulse cancellation line is coupled between the optical splitter and the second photodiode. Neither Berry 249' or any of the references of record teaches or suggests a method for filtering an optical signal comprising the steps of circulating the optical signal through a first and second directional coupler, extracting a percentage of light from the optical signal each time the optical signal passes through each of the first and second directional couplers and thereby generating a series of positive and negative signals and canceling a first positive signal in the series of positive signals. These limitations

are recited in claims 1-29 and are considered to be patentable over the teachings of Berry 249' and all of the recited references of record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "**Comments on Statement of Reasons for Allowance.**"

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure Hunt et. al., U.S.P. No. 4,128,759 (Figs.1-4), Mc Donald, U.S.P. No. 5,376,786 (Figs.1-5), Hayes U.S. Patent Application Publication No. U.S.2004/0120642A1 (Note entire disclosure) and Burns, U.S.P. No. 4,976,518 (Figs.1-5).

All of the prior art documents submitted by applicant in the Information Disclosure Statement filed on July 26, 2004 been considered and made of record. Note the attached initialed copy of form PTO-1449.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian M. Healy whose telephone number is (571)272-2347. The examiner can normally be reached on Compressed Schedule Tues-Thurs. 7AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank Font can be reached on (571)272-2415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**Brian M. Healy
Primary Examiner
Art Unit 2883**



**Brian Healy
Primary Examiner**